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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/183,621	10/30/1998	MARTIN LIVESEY	49658-025	3358

7590 05/20/2004

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EXAMINER

GOOD JOHNSON, MOTILEWA

ART UNIT	PAPER NUMBER
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2672

38

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/183,621

Applicant(s)

LIVESEY, MARTIN

Examiner

Motilewa A. Good-Johnson

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-28,31-33 and 36-39 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 26-28,31-33 and 36-39 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the following communications: application, filed on 10/30/1998; Amendment A, filed on 09/25/2000; Appeal Brief, filed on 08/22/2001; Amendment B, filed on 02/27/2002; Request for reconsideration, filed on 09/04/2002; Amendment C, filed 06/30/2003; Amendment D, filed 10/20/2003; Amendment E, filed 03/05/2004.

This action is made final.

2. Claims 26-28, 31-33 and 36-39 are pending.
3. The present title of this application is "Aperiodic Tiling of Textured Images" (as originally filed).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 26-28, 31-33 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lalvani, U.S. Patent Number 5,575,1256, "Periodic and Non-Periodic Tilings and Building Blocks form Prismatic Nodes", class 52/311.2 in view of Stam, *Aperiodic Texture Mapping*, ERCIM, July 1996- March 1997, pages 1-9.

Regarding claim 26, Lalvani discloses a method for performing textured mapping of a target area, wherein execution of the one or more processors causes the one or more processor to perform the steps of: identifying an aperiodic tile set (obtaining a tiling pattern including non-periodic tilings, col. 5, lines 11-22)

However it is noted that Lalvani fails to disclose selecting a placement of said aperiodic tile set on a textured image area; based on said placement, generating textured tiles by mapping said aperiodic tile set onto said textured image area; and covering said target area in an aperiodic tiling pattern with at least one textured tile selected from said textured tiles.

Stam discloses a computer graphics modeling tool algorithm which texture maps a texture on a square domain onto a surface, i.e. target area, and based on the texture map with the period boundaries generating an aperiodic tiles of the texture map, page 2, and allowing an animator to design the shape of an object using free form surfaces, page 2, and further discloses constructing aperiodic tiling using non-square shapes, page 4.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the aperiodic tile set selecting placement on a textured image area as disclosed in Stam to allow versatility in the random-look of non-periodic tile configurations in texture for a designer without rule-based tiles.

Regarding claim 27, receiving input that defines said textured image area. (Stam discloses receiving the texture map, page 2)

Regarding claim 28, the step of covering said target area in said aperiodic tiling pattern . . . includes the step of: placing said textured tiles in an overlapping configuration on said target area. (Stam discloses the aperiodic tile generated by recursively replacing each tile, therefore providing an overlap in the texture tile, page 2)

Regarding claim 31, Lalvani discloses a computer-readable medium carrying one or more sequences of instructions for performing textured mapping of a target area, wherein the execution of one or more sequences of instructions by one or more processors causes the one or more processor to perform the steps of: identifying an aperiodic tile set; (col. 5, lines 11-22)

However, it is noted that Lalvani fails to disclose selecting a placement of said aperiodic tile set on a textured image are; based on said placement, generating texture tiles by mapping said aperiodic tile set onto said textured image area; and covering said target area in an aperiodic tiling pattern with at least one textured tile selected from said textured tiles.

Stam discloses a computer graphics modeling tool algorithm which texture maps a texture on a square domain onto a surface, i.e. target area, and based on the texture map with the period boundaries generating an aperiodic tiles of the texture map, page 2 and allowing an animator to design the shape of an object using free form surfaces, page 2, and further discloses constructing aperiodic tiling using non-square shapes, page 4.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the aperiodic tile set selecting placement on a textured image

area as disclosed in Stam to allow versatility in the random-look of non-periodic tile configurations in texture for a designer without rule-based tiles.

Regarding claim 32, receiving input that defines said textured image area. (Stam discloses receiving the texture map, page 2)

Regarding claims 33, 36 and 38, however, it is noted that Lalvani fails to disclose placing said textured tiles.

Stam discloses receiving the texture map, page 2, and Lalvani discloses in an overlapping configuration on said target area (col. 12, lines 30-33)

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the overlapping configuration the placement of textured tiles to allow versatility in the random-look of non-periodic tile configurations in texture for a designer without rule-based tiles

Regarding claims 37 and 39, However, it is noted that Lalvani fails to disclose combining colors of a first texel from a first texture tile and a second texel from a second texture tile, wherein said first texel and said texel map to a single pixel within said target area.

Stam discloses different colors for the edges of the tiles, page 2, and Lalvani discloses overlapping configuration on the tile area.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include combining colors of the overlapping tile configuration and the tile texel colors to provide blending of the overlapping colors in the respective tile area.

Response to Arguments

6. Applicant's arguments with respect to claims 26-28 and 31-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is

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(703) 305-3939. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Motilewa A. Good-Johnson
Examiner
Art Unit 2672

mgj
May 11, 2004



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600